

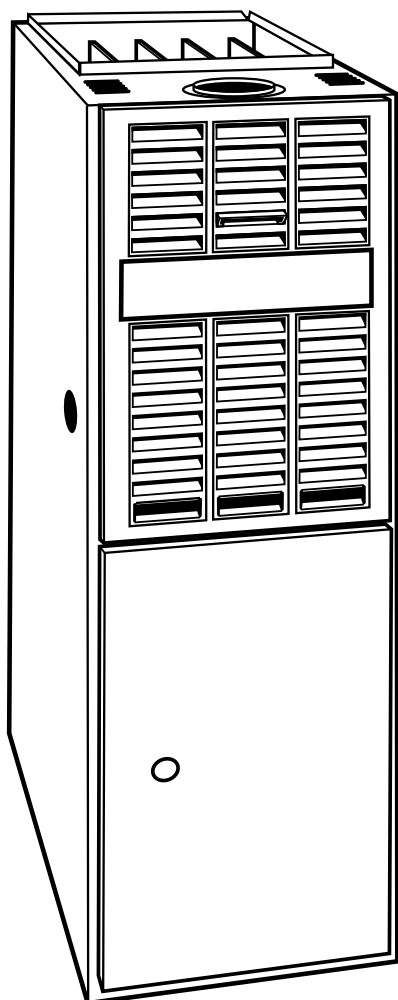


Product Data

58GFA

Induced-Combustion Upflow Furnace

Heating Inputs:
65,000 thru 150,000 Btuh



78% AFUE With Continuous-Pilot Ignition

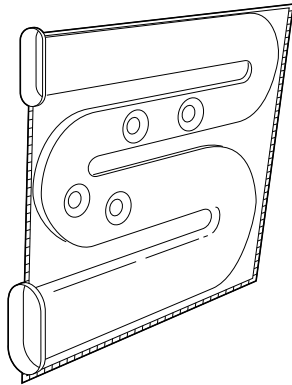
Carrier is the first manufacturer to provide a 78% Annual Fuel Utilization Efficiency (AFUE) gas furnace for the budget conscious consumer and builder. The 58GFA offers the same high quality you demand from Carrier.

The superior attention to cabinet detail is obvious. The Carrier 58GFA features 1-piece, seamless, wrap-around construction. There are no spot welds on the exterior surfaces of the furnace. There is also double protection for the cabinet. First, a galvanized steel substrate provides resistance to rusting; then the cabinet is constructed of prepainted steel — the same high-quality finish found on refrigerators and dishwashers.

The 58GFA offers a proven continuous-pilot ignition system which provides superior reliability.

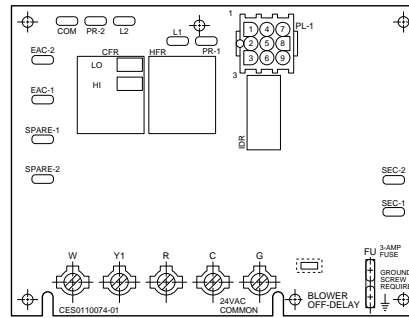
Carrier's patented Super-S heat exchanger improves heat transfer and enables downsizing of this furnace to only 40-in. tall. It is covered by a 10-year heat exchanger Limited Warranty.

The solid-state control board is the brain of this induced-combustion gas furnace. The control board features a 3-amp fuse which protects the 24-v control transformer.



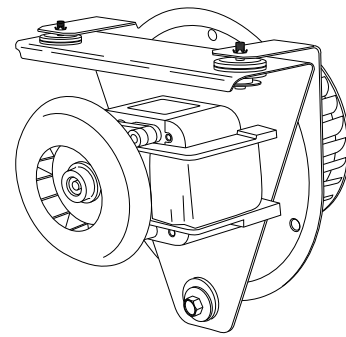
HEAT EXCHANGER

A89217



**PRINTED-CIRCUIT
BOARD**

A96287



INDUCER BLOWER

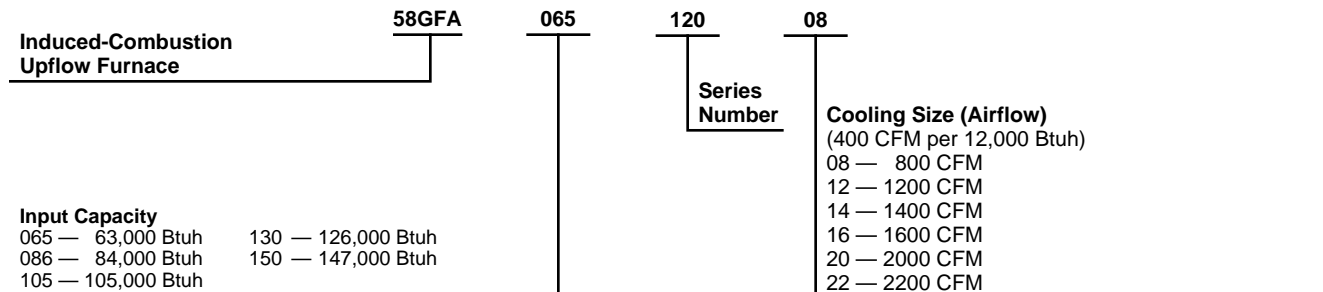
A92074

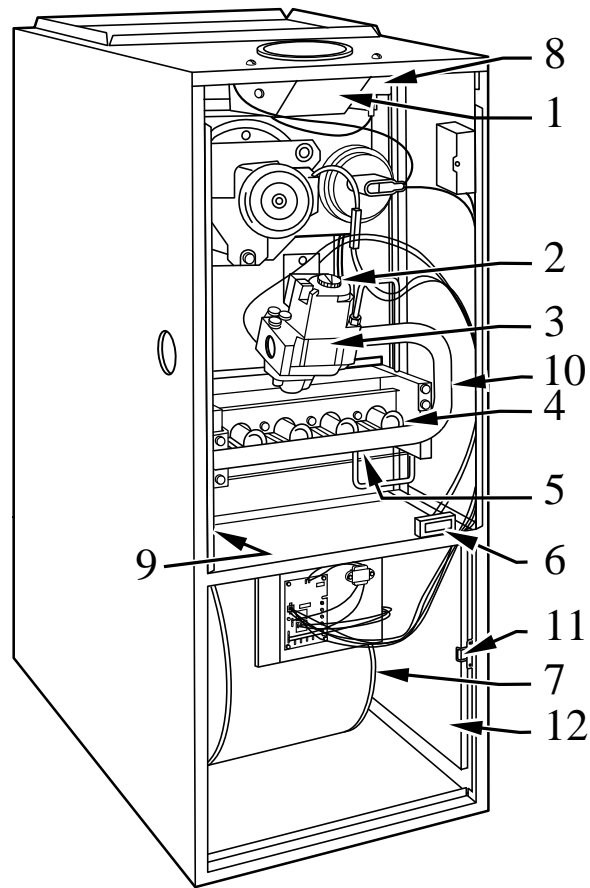


MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

Model number nomenclature



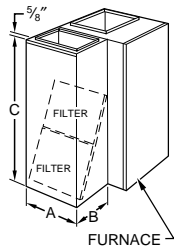


A94257

NOTES: 1. The 58GFA Furnaces are for use with natural gas. These furnaces can be field converted for propane gas with a factory-authorized and listed accessory conversion kit.
2. Control location and actual control may be different than shown above.

- | | |
|---|--------------------------------------|
| ❶ Relief Box | ❷ Blower and Blower Motor |
| ❸ Gas Valve Control Knob (On, Pilot, Off) | ❸ Draft Safeguard Tube and Switch |
| ❹ Gas Valve | ❹ Rating Plate (Behind Junction Box) |
| ❺ Gas Burner | ❺ Gas Manifold |
| ❻ Pilot Burner and Thermocouple | ❻ Filter Retainer |
| ❼ Blower Door Safety Switch | ❼ Air Filter |

Carrier accessories*

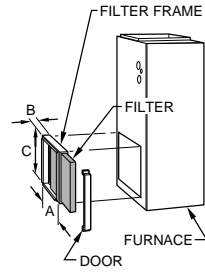


A93067

RETURN-AIR PLENUM

Custom-made return-air plenum can be mounted on either side of the furnace. Includes washable filters.

| | |
|---|------------|
| A | 25 in. |
| B | 16 in. |
| C | 39-7/8 in. |

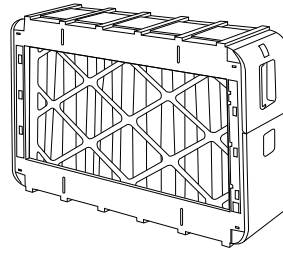


A93068

SIDE FILTER RACK

Custom made filter rack for easy connection when a return plenum already exists. Provides easy access for cleaning filter.

| | |
|---|------------|
| A | 23-1/8 in. |
| B | 2-3/8 in. |
| C | 14-1/2 in. |

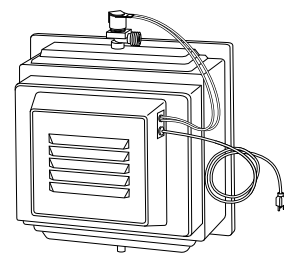


A95432

MECHANICAL OR ELECTRONIC AIR CLEANER

Cleans the air of smoke, dirt, and many pollens commonly found. Saves decorating and cleaning expenses by keeping carpets, furniture, and drapes cleaner.

Mechanical air cleaner is shown.



A91365

MODEL 49FH HUMIDIFIER

By adding moisture to winter-dry air, a Carrier humidifier can often improve the comfort and keep furniture, rugs, and draperies in better condition. Moisturizing household air also helps to retain normal body heat and provides comfort at lower temperatures.

| UNIT SIZE | 065-08 & 12 | 086-14 & 16 | 105-12, 16, & 22 | 130-16 & 20 | 150-20 |
|---|--|-------------|------------------|-------------|--------|
| AIR CLEANER | Model AIRA, KEACA, 31MF, or MECH | | | | |
| HUMIDIFIER | Model 49BF, 49BG, 49FH, 49FP, or 49WS | | | | |
| VENTILATOR | Model VA3B, VB5B, VC5B, or VL3A | | | | |
| THERMOSTAT — NON-PROGRAMMABLE | For Use with Air Conditioner — TSTATCCNAC01-A For Use with Heat Pump — TSTATCCNHP01-A | | | | |
| THERMOSTAT — PROGRAMMABLE | For Use with Air Conditioner — TSTATCCPAC01-A For Use with Heat Pump — TSTATCCPHP01-A | | | | |
| RETURN-AIR PLENUM (With Washable Filters) | KGARP0201ALL | | | | |
| SIDE FILTER RACK (Accepts Filter) | KGAFR0206ALL | | | | |
| TWINNING KIT | KGATW0501STP | | | | |
| GAS CONVERSION KIT — Natural-To-Propane | KGANP2001ALL | | | | |
| Propane-To-Natural | KGAPN1601ALL | | | | |

*Factory-authorized and field installed. Gas conversion kits are A.G.A. recognized.

Physical data

| UNIT SIZE | | 065 | | 086 | | 105 | | | 130 | | 150 |
|--|----------------------|------------------------------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| | | 08 | 12 | 14 | 16 | 12 | 16 | 22 | 16 | 20 | 20 |
| OUTPUT CAPACITY BTUH† | Nonweatherized ICS** | 51,000 | 51,000 | 67,000 | 68,000 | 85,000 | 85,000 | 84,000 | 101,000 | 101,000 | 119,000 |
| INPUT BTUH* | | 63,000 | 63,000 | 84,000 | 84,000 | 105,000 | 105,000 | 105,000 | 126,000 | 126,000 | 147,000 |
| SHIPPING WEIGHT (Lb) | | 126 | 128 | 143 | 147 | 153 | 159 | 176 | 171 | 186 | 196 |
| CERTIFIED TEMP RISE RANGE (°F) | | 35-65 | 25-55 | 35-65 | 30-60 | 45-75 | 35-65 | 30-60 | 50-80 | 35-65 | 45-75 |
| CERTIFIED EXT STATIC PRESSURE (In. wc) | Heating | 0.12 | 0.12 | 0.15 | 0.15 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | Cooling | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| AIRFLOW CFM‡ | Heating | 830 | 1140 | 1170 | 1445 | 1175 | 1410 | 1720 | 1385 | 1975 | 1670 |
| | Cooling | 950 | 1195 | 1360 | 1655 | 1205 | 1575 | 2210 | 1545 | 1980 | 1935 |
| LIMIT CONTROL | | SPST | | | | | | | | | |
| HEATING BLOWER CONTROL | | Solid-State Time Operation | | | | | | | | | |
| BURNERS (Monoport) | | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 7 |
| GAS CONNECTION SIZE | | 1/2-in. NPT | | | | | | | | | |
| GAS VALVE (Redundant) Manufacturer | | Honeywell | | | | | | | | | |
| Minimum Inlet Pressure (In. wc) | | 4.5 (Natural Gas) | | | | | | | | | |
| Maximum Inlet Pressure (In. wc) | | 13.6 (Natural Gas) | | | | | | | | | |
| IGNITION DEVICE | | Thermocouple-Type Continuous Pilot | | | | | | | | | |

* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4% for each 1000 ft above sea level.

† Capacity and AFUE in accordance with U.S. Government DOE test procedures.

‡ Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air.

A filter is required for each return-air supply.

** Isolated Combustion System

Dimensions

CLEARANCES (In.)

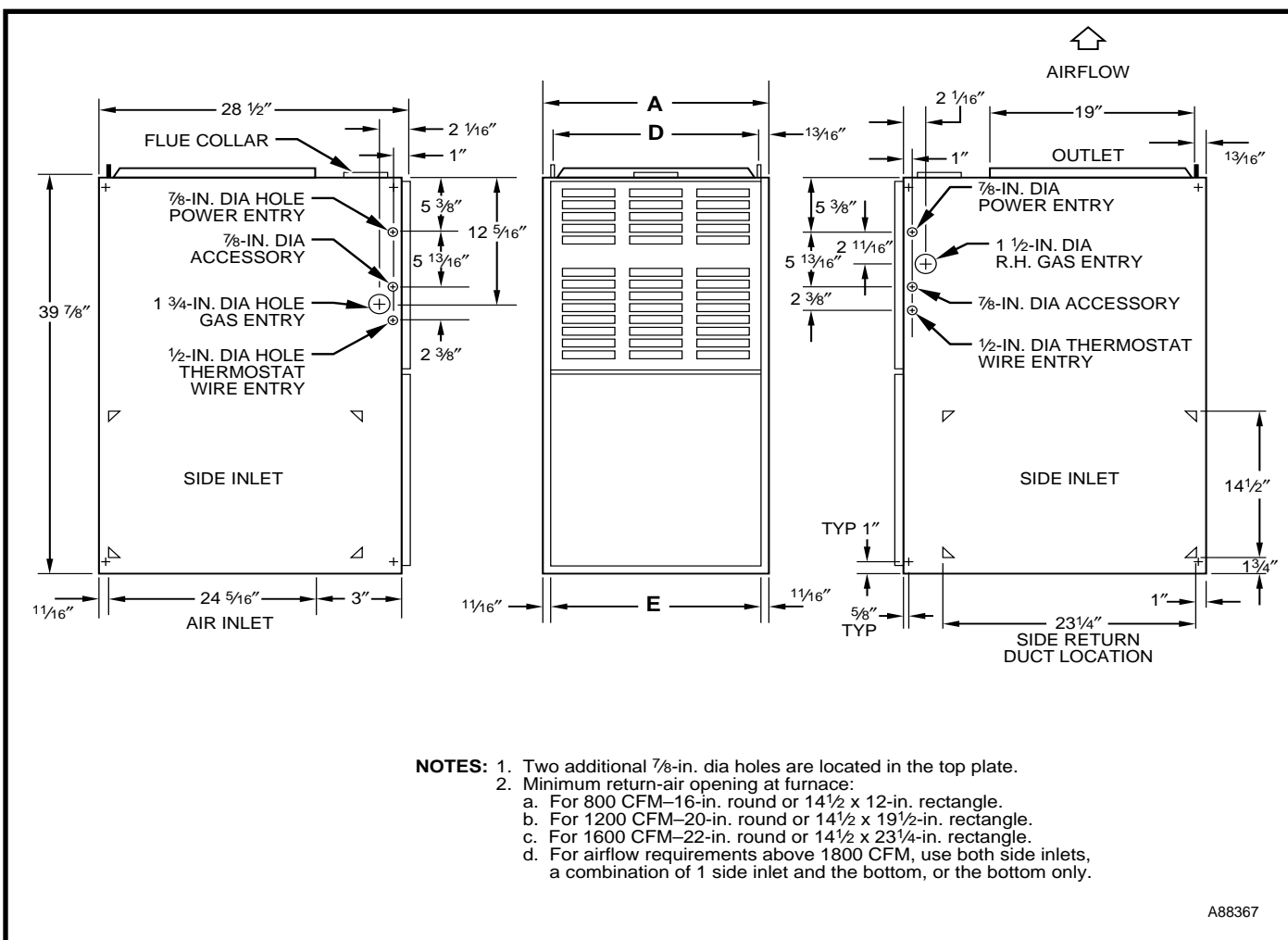
| UNIT SIZE | 065 | 086 — 150 |
|-----------------------------------|-----|-----------|
| Sides — Single-Wall Vent | 1 | 0 |
| Type B-1 Double-Wall Vent | 0 | 0 |
| Back | 0 | 0 |
| Top of Plenum | 1 | 1 |
| Vent Connector — Single-Wall Vent | 6 | 6 |
| Type B-1 Double-Wall Vent | 1 | 1 |
| Front* — Single-Wall Vent | 6 | 6 |
| Type B-1 Double-Wall Vent | 3 | 3 |
| Service | 30 | 30 |

* The 3-in. front clearance is needed for combustion-air and ventilation-air entry.

DIMENSIONS (In.)

| UNIT SIZE | A | D | E | VENT CONN* |
|--------------|---------|---------|----------|---------------|
| 065-08 | 14-3/16 | 12-9/16 | 11-11/16 | 4 |
| 065-12 | 14-3/16 | 12-9/16 | 11-11/16 | 4 |
| 086-14 | 17-1/2 | 15-7/8 | 16 | 4 |
| 086-16 | 21 | 19-3/8 | 18-1/2 | 4 |
| 105-12 | 17-1/2 | 15-7/8 | 16 | 4 |
| 105-16 | 21 | 19-3/8 | 18-1/2 | 4 |
| 105-22 | 24-1/2 | 22-7/8 | 22 | 4 |
| 130-16 | 21 | 19-3/8 | 18-1/2 | 5 |
| 130-20 | 24-1/2 | 22-7/8 | 22 | 5 |
| 150-20 | 24-1/2 | 22-7/8 | 22 | 5 |

* Refer to the furnace Installation Instructions for proper venting procedures.



Performance data

| | 065 | | 086 | | 105 | | | 130 | | 150 |
|---------------------------------------|--------|--------|--------|--------|--------|--------|---------|--------|---------|---------|
| UNIT SIZE | 08 | 12 | 14 | 16 | 12 | 16 | 22 | 16 | 20 | 20 |
| DIRECT-DRIVE MOTOR Hp (PSC) | 1/5 | 1/3 | 1/3 | 1/2 | 1/3 | 1/2 | 3/4 | 1/2 | 3/4 | 3/4 |
| MOTOR FULL LOAD AMPS | 4.9 | 6.5 | 6.8 | 8.2 | 5.8 | 7.9 | 12.2 | 7.9 | 11.1 | 11.5 |
| RPM (Nominal) — SPEEDS | 1075-4 | 1075-4 | 1075-4 | 1075-4 | 1075-4 | 1075-4 | 1075-4 | 1075-4 | 1075-4 | 1075-4 |
| BLOWER WHEEL DIAMETER x WIDTH (In.) | 10 x 6 | 10 x 6 | 10 x 7 | 10 x 8 | 10 x 7 | 10 x 8 | 11 x 10 | 10 x 8 | 11 x 10 | 11 x 10 |
| WASHABLE 16 x 25 x 1-In. FILTER — No. | 1 | 1 | 1 | — | 1 | — | — | — | — | — |
| WASHABLE 20 x 25 x 1-In. FILTER — No. | — | — | — | 1 | — | 1 | — | 1 | — | — |
| WASHABLE 24 x 25 x 1-In. FILTER — No. | — | — | — | — | — | — | 1 | — | 1 | 1 |

PSC — Permanent Split Capacitor

ENERGY EFFICIENCY

| UNIT SIZE | | 065 | | 086 | | 105 | | | 130 | | 150 |
|------------------|----------------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| | | 08 | 12 | 14 | 16 | 12 | 16 | 22 | 16 | 20 | 20 |
| CAPACITY* | Nonweatherized ICS† | 51,000 | 51,000 | 67,000 | 68,000 | 85,000 | 85,000 | 84,000 | 101,000 | 101,000 | 119,000 |
| AFUE %* | Nonweatherized ICS† | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 |

* Capacity and AFUE in accordance with U.S. Government DOE test procedures.

† Isolated Combustion System

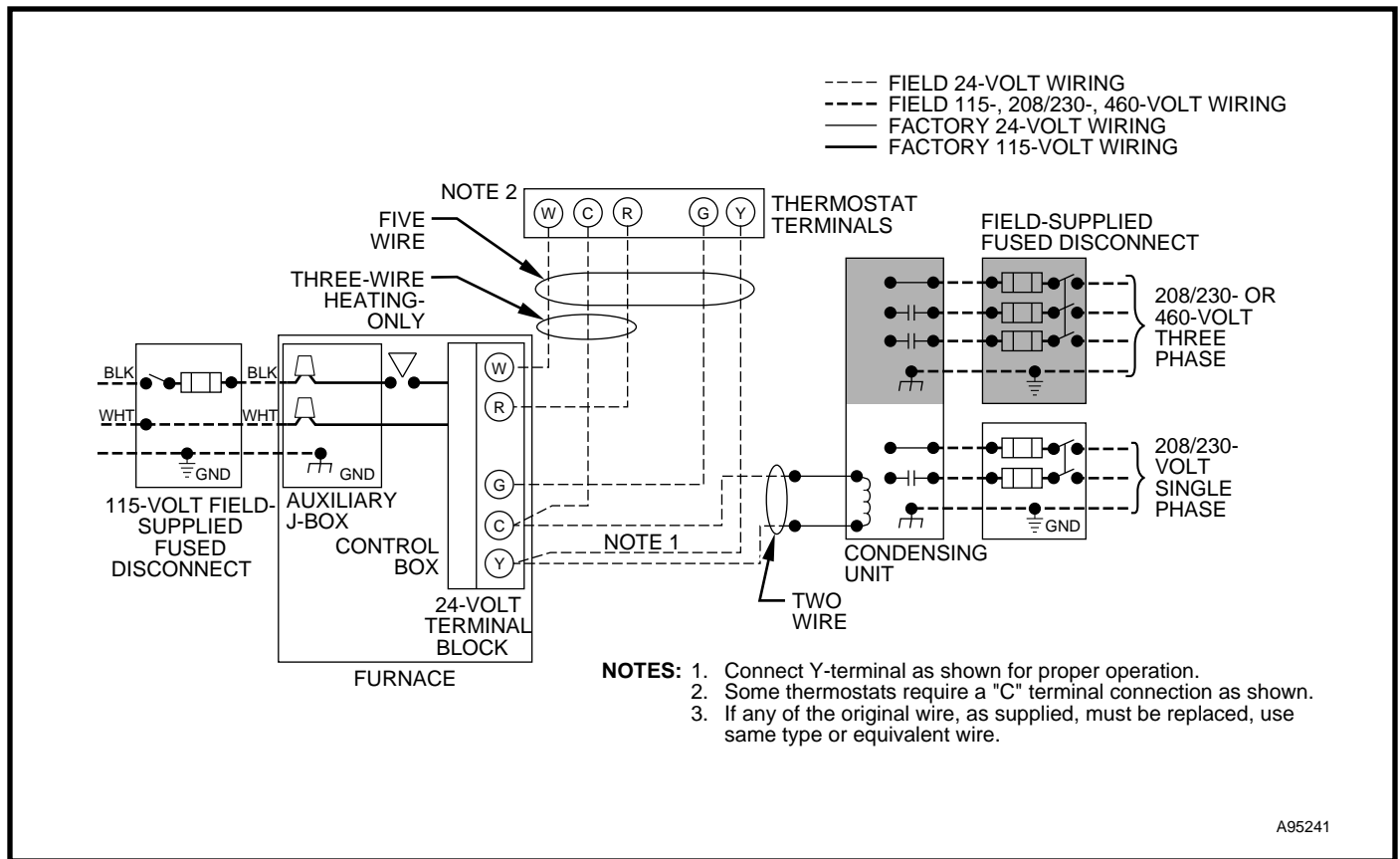
AIR DELIVERY — CFM (WITH FILTER)*

| UNIT SIZE | SPEED | EXTERNAL STATIC PRESSURE (IN. WC) | | | | | | | |
|---------------|----------|-----------------------------------|------|------|------|------|------|------|------|
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 |
| 065-08 | High | — | 1055 | 1030 | 995 | 950 | 900 | 830 | 750 |
| | Med-High | — | 830 | 810 | 790 | 750 | 720 | 665 | 580 |
| | Med-Low | 700 | 680 | 660 | 635 | 605 | 555 | 505 | 445 |
| | Low | 600 | 575 | 550 | 520 | 475 | 450 | 400 | 340 |
| 065-12 | High | 1430 | 1380 | 1325 | 1265 | 1195 | 1125 | 1045 | 945 |
| | Med-High | 1310 | 1275 | 1235 | 1190 | 1135 | 1065 | 990 | 900 |
| | Med-Low | 1140 | 1130 | 1100 | 1065 | 1000 | 965 | 910 | 815 |
| | Low | 990 | 965 | 960 | 935 | 905 | 855 | 800 | 710 |
| 086-14 | High | 1570 | 1535 | 1480 | 1415 | 1360 | 1280 | 1185 | 1070 |
| | Med-High | 1370 | 1355 | 1330 | 1290 | 1240 | 1170 | 1080 | 955 |
| | Med-Low | 1170 | 1165 | 1150 | 1115 | 1085 | 1035 | 970 | 880 |
| | Low | 1010 | 1005 | 990 | 965 | 950 | 905 | 845 | 745 |
| 086-16 | High | 1940 | 1875 | 1745 | 1730 | 1655 | 1545 | 1420 | 1315 |
| | Med-High | 1665 | 1605 | 1575 | 1545 | 1490 | 1405 | 1300 | 1170 |
| | Med-Low | 1460 | 1430 | 1395 | 1355 | 1325 | 1260 | 1165 | 1080 |
| | Low | 1260 | 1240 | 1235 | 1215 | 1185 | 1115 | 1045 | 935 |
| 105-12 | High | 1470 | 1415 | 1340 | 1270 | 1205 | 1115 | 985 | 845 |
| | Med-High | 1340 | 1305 | 1245 | 1185 | 1130 | 1045 | 915 | 780 |
| | Med-Low | 1185 | 1175 | 1140 | 1075 | 1030 | 950 | 835 | 705 |
| | Low | 1015 | 1010 | 980 | 955 | 910 | 840 | 725 | 600 |
| 105-16 | High | 1880 | 1815 | 1745 | 1690 | 1575 | 1500 | 1400 | 1265 |
| | Med-High | 1660 | 1615 | 1570 | 1505 | 1435 | 1355 | 1260 | 1170 |
| | Med-Low | 1455 | 1410 | 1375 | 1350 | 1290 | 1235 | 1145 | 985 |
| | Low | 1265 | 1265 | 1240 | 1210 | 1180 | 1110 | 995 | 855 |
| 105-22 | High | 2475 | 2405 | 2330 | 2265 | 2210 | 2130 | 2040 | 1945 |
| | Med-High | 2055 | 2025 | 2000 | 1965 | 1930 | 1865 | 1795 | 1720 |
| | Med-Low | 1725 | 1720 | 1705 | 1685 | 1665 | 1630 | 1585 | 1525 |
| | Low | 1500 | 1515 | 1510 | 1500 | 1480 | 1460 | 1415 | 1370 |
| 130-16 | High | 1850 | 1785 | 1710 | 1630 | 1545 | 1430 | 1320 | 1185 |
| | Med-High | 1635 | 1595 | 1540 | 1480 | 1400 | 1300 | 1185 | 1065 |
| | Med-Low | 1420 | 1385 | 1360 | 1295 | 1245 | 1165 | 1080 | 970 |
| | Low | 1225 | 1200 | 1180 | 1145 | 1105 | 1055 | 990 | 870 |
| 130-20 | High | — | 2210 | 2130 | 2055 | 1980 | 1895 | 1795 | 1680 |
| | Med-High | 2015 | 1975 | 1925 | 1880 | 1805 | 1735 | 1655 | 1555 |
| | Med-Low | 1730 | 1710 | 1670 | 1635 | 1590 | 1535 | 1470 | 1385 |
| | Low | 1525 | 1520 | 1495 | 1450 | 1410 | 1375 | 1315 | 1245 |
| 150-20 | High | 2220 | 2155 | 2105 | 2025 | 1935 | 1850 | 1765 | 1670 |
| | Med-High | 1980 | 1920 | 1875 | 1815 | 1760 | 1700 | 1625 | 1530 |
| | Med-Low | 1690 | 1670 | 1645 | 1615 | 1570 | 1520 | 1415 | 1385 |
| | Low | 1445 | 1435 | 1425 | 1405 | 1365 | 1325 | 1280 | 1225 |

* Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air. A filter is required for each return-air supply.

— Indicates unstable operating conditions.

Typical wiring schematic



Electrical data

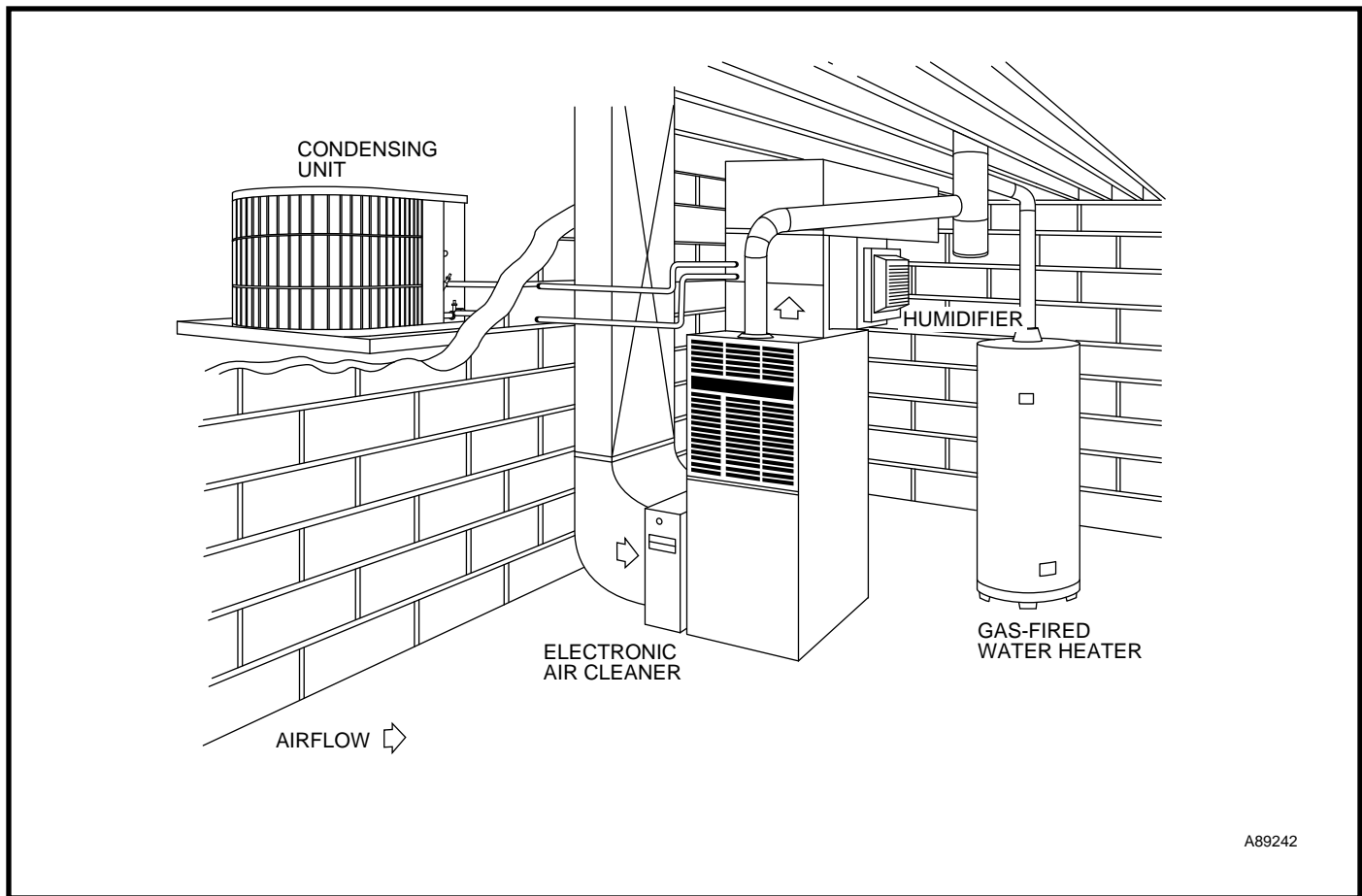
| UNIT SIZE | 065-08 | 065-12 | 086-14 | 086-16 | 105-12 | 105-16 | 105-22 | 130-16 | 130-20 | 150-20 |
|--|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| UNIT VOLTS — HERTZ — PHASE | 115 — 60 — 1 | | | | | | | | | |
| MINIMUM WIRE SIZE | 14 | 14 | 14 | 14 | 14 | 14 | 12 | 14 | 12 | 12 |
| MAXIMUM WIRE LENGTH* (Ft) | 41 | 34 | 33 | 28 | 37 | 29 | 33 | 29 | 36 | 35 |
| MAXIMUM UNIT AMPS | 7.1 | 8.7 | 9.0 | 10.4 | 8.0 | 10.1 | 14.4 | 10.1 | 13.3 | 13.7 |
| OPERATING VOLTAGE RANGE† (Min — Max) | 104 — 127 | | | | | | | | | |
| MAXIMUM FUSE SIZE OR HACR-TYPE CKT BKR‡ (Amps) | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 20 | 20 |
| TRANSFORMER (24v) | 40va | | | | | | | | | |
| EXTERNAL CONTROL POWER AVAILABLE | Heating | | | | | | | | | |
| | 21va | | | | | | | | | |
| EXTERNAL CONTROL POWER AVAILABLE | Cooling | | | | | | | | | |
| | 32va | | | | | | | | | |
| AIR CONDITIONING BLOWER RELAY | Standard | | | | | | | | | |

* Length shown is as measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.

† Permissible limits of the voltage range at which the unit will operate satisfactorily.

‡ Time-delay fuse is recommended.

Typical installations



SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

CALL FOR FREE CATALOG 1-800-962-9212

☐ Packaged Service Training ☐ Classroom Service Training

A94328